

NEW GENERA, SPECIES AND COMBINATIONS IN SCROPHULARIACEAE—MANULEAE

O. M. HILLIARD

ABSTRACT. *Phyllopodium* is reinstated as a genus distinct from *Polycarena* and three new genera in their general affinity are described and a key provided to distinguish them. The new genera are *Glekia*, monotypic, based on *Phyllopodium krebsianum*; *Melanospermum*, type species *M. transvaalense* [*Polycarena transvaalensis*], 6 species in all, 3 newly described; *Trieneea*, type species *T. schlechteri* [*Phyllopodium schlechteri*], 9 species in all, 7 newly described. Under *Phyllopodium*, 7 new combinations are made based on 5 names currently placed in *Polycarena* and 2 in *Selago*, and 7 are newly described. Under *Polycarena*, 9 species and one variety are newly described.

The tribe Manuleae at present comprises the genera *Manulea* L. (*Nemia* Berg.), *Sutera* Roth (including *Camptoloma* Benth., *Chaenostoma* Benth., *Lyperia* Benth., *Sphenandra* Benth., *Jamesbrittenia* Kuntze), *Polycarena* Benth., *Phyllopodium* Benth. (in my view, Mrs Levyns (1939) was mistaken in uniting *Polycarena* and *Phyllopodium*), *Zaluzianskya* F. W. Schmidt (including *Nycterinia* D. Don), *Glumicalyx* Hiern and *Strobilopsis* Hilliard & Burtt. Hilliard & Burtt have already published revisions, part revisions or comments on many of these genera, and my current work is concerned with the delimitation of *Polycarena* and *Phyllopodium*, and the generic position of species included by Hiern (1904) under these names in *Flora Capensis*. This has entailed the detailed examination of many species, not only of members of Manuleae, but also of *Selago* L., in the tribe Selagineae. It is now clear that all the genera need critical revision. Given the very large number of species involved, this will take several years to complete. As an interim measure to facilitate the return of borrowed material, it is proposed to publish at suitable intervals various nomenclatural formalities including the diagnoses of new names.

Three new genera in the general affinity of *Phyllopodium* and *Polycarena* are proposed here. As only short Latin diagnoses are given, a key to the five genera is also provided; full descriptions and discussion of important characters will follow in the main papers.

- 1a. Leaves opposite or subopposite, bases connate, decurrent on the stem in two narrow ciliate ridges reaching the node below, stem otherwise glabrous **Glekia**
- 1b. Leaves either alternate or opposite but bases not decurrent in two ciliate ridges 2
- 2a. Bract adnate to pedicel and at least half of calyx tube (rarely less) 3
- 2b. Bract adnate to part or whole of pedicel, sometimes to base of calyx as well (never more than lower third of calyx tube). 4
- 3a. Hairs on stems (and elsewhere) always patent, gland-tipped; testa translucent, loosely enveloping seed **Polycarena**

- 3b. Hairs on stems either wholly eglandular, or mixed with glandular hairs, but some eglandular hairs always present, particularly near base of stem and there nearly always retrorse; patent eglandular hairs always present on margins of bracts; testa \pm opaque, tightly investing seed

Phyllopodium

- 4a. Corolla with an orange/yellow patch at base of posticous lip and down back of tube; seeds creamy or pallid amber, sinuously wrinkled in vertical bands **Trieneea**
 4b. Orange/yellow patch on corolla confined to posticous lip; seeds black, coarsely reticulate **Melanospermum**

Glekia Hilliard, **genus novum** a *Phyllopodio* Benth. foliis oppositis vel suboppositis basibus decurrentibus porcas angustas in caule formantibus (in *Phyllopodio* foliis nec decurrentibus nec porcas formantibus), et corolla texturae crassae mox post anthesin caduca (nec membranacea et saepe in fructu maturo persistente) differt.

Type species: *Glekia krebsiana* (Benth.) Hilliard.

Derivation of name: commemorates G. L. E. Krebs, a pharmacist and naturalist who lived in the eastern Cape during the early part of the 19th century and who sent the first collection of the plant back to Europe.

Glekia krebsiana (Benth.) Hilliard, **comb. nov.**

Type: South Africa, without precise locality, *Krebs* 238 (holo. G-DC, n.v., iso. S).

Syn.: *Phyllopodium krebsianum* Benth. in A. DC., Prodr. 10:353 (1846).

Melanospermum Hilliard, **genus novum** a *Phyllopodio* Benth. bractea ad pedicellum tantum adnata vel interdum etiam ad imam basim calycis (nec ad pedicellum et saltem ad dimidium inferius calycis adnata), indumento (pilis caulinis rectis cellula basali praeditis in *Melanospermo*, in *Phyllopodio* cellula basali fere semper carente et cellulis saepe curvatis vel falcatis) et seminibus nigris profunde reticulatis (in *Phyllopodio* vel cremeis vel subcaesiis vel succineis, et laevibus vel colliculatis vel rugosis sed numquam reticulatis) distinguenda.

Type species: *Melanospermum transvaalense* (Hiern) Hilliard.

Derivation of name: from the black seeds.

Melanospermum foliosum (Benth.) Hilliard, **comb. nov.**

Type: Transvaal, Magaliesberg, *Burke* 192 (holo. K, iso. PRE, n.v.).

Syn.: *Polycarena foliosa* Benth. in A. DC., Prodr. 10:351 (1846).

P. discolor Schinz in Verh. Bot. Ver. Brandenb. 31:191 (1890). Type: S.W.A., western margin of the Kalahari, Uri, *Schinz* 360 (holo. Z, iso. K).

Melanospermum italae Hilliard, **species nova** *M. transvaalensi* (Hiern) Hilliard affinis sed pilis glandulosis absentibus (interdum glandulis minutissimis subsessilibus infra inflorescentiam inventis), foliis caulinis plerumque latioribus petiolatis (nec sessilibus), lamina 1.5–8mm lata (nec 0.5–2mm), calycis tubo saepe longiore (1.5–2mm nec 0.75–1.5mm),

corollae tubo longiore (5·5–2mm nec 2·5–4mm) distinguitur. Ab *M. folioso* (Benth.) Hilliard pilis glandulosis carentibus, pilis eglandulosis eis *M. foliosi* plerumque brevioribus (c.0·1–0·5mm nec 0·5–1mm) cellula apicali aliis multo majore (ad apicem non attenuata), corollae tubo 5·5–2mm nec 2·5–4mm) differt.

Type: Natal, Ngotshe distr., Itala Nature Reserve, c.5000ft, 4 iv 1977, Hilliard & Burt 10025 (holo. E; iso. NU, PRE, S).

Ranges from Mbabane in Swaziland south into northernmost Natal.

Melanospermum rudolfii Hilliard, *species nova* a *M. rupestri* (Hiern) Hilliard habitu erecto (nec diffuso), indumento multo brevior glanduloso-puberulo pilis paucissimis et in caulibus et in foliorum et bractearum marginibus inferioribus ad 0·5mm longis (nec indumento villosa, pilis plerumque 0·75–1·5mm longis), calycis lobis longioribus 1·25–1·5mm (nec 0·75–1mm), corollae limbo plerumque majore (5–6mm trans lobos laterales, nec 2·5–5mm) ad basin lobi postici barbato (nec glabro). A *M. swazico* Hilliard indumento brevior caulibus foliorum bractearum (pro maxima parte glanduloso-puberulo insuper pilis paucissimis ad 0·5mm longis, nec pilis plerumque 0·5–1·25mm), calycis tubo longiore 1·25–1·5mm (nec 0·6–0·75mm), corollae tubo longiore (c.4·5mm, nec 2·6–3·25mm) et corollae limbo majore (c.5–6mm trans lobos laterales, nec 2–3·5mm) distinguenda. Type: Transvaal, Middelburg distr., 2529 CB, Botsabelo, 1600m, 28 xii 1893, Schlechter 4078 (holo. E; iso. K, PRE, S).

Known only from the type collection.

Melanospermum rupestre (Hiern) Hilliard, *comb. nov.*

Type: Transvaal, among rocks on the north side of Bezuidenhout's valley near Johannesburg, May 1903, Rand 1326 (holo. BM).

Syn.: *Phyllopodium rupestre* Hiern in Thiselton-Dyer, Fl. Cap. 4(2):317 (1904).

Polycarena rupestris (Hiern) Levyns in J. S. Afr. Bot. 5:37 (1939).

Melanospermum swazicum Hilliard, *species nova* *M. rupestri* (Hiern) Hilliard affinis sed habitu annuo caule erecto solitario (nec perenni diffuso e basi multicauli), pubescentia saepe brevior (pilis caulibus longissimis 0·25–1mm, nec 0·75–1·25mm; pilis bractearum usque ad 0·6mm, nec 0·75–1·5mm) et corollae tubo saepe brevior (2·6–3·5mm, nec 3·5–5(–10)mm) distinguenda.

Type: Swaziland, Mbabane, 2632 AC, Ukutula, c.4000ft, 20 ii 1956, Compton 25620 (holo. NBG).

Known from the hills around Mbabane in Swaziland, and possibly also occurs in northernmost Natal.

Melanospermum transvaalense (Hiern) Hilliard, *comb. nov.*

Lectotype (chosen here): Transvaal, Wilge Rivier, 1530m, 3 i 1894, Schlechter 4125 (K; isoelecto. BM, BOL, E, S).

Syn.: *Polycarena transvaalensis* Hiern in Thiselton-Dyer, Fl. Cap. 4(2):330 (1904).

Phyllopodium calvum Hiern in Thiselton-Dyer, Fl. Cap. 4(2):315 (1904). Type: Transvaal, between Middelburg and Pretoria, high-lands at Brug Spruit, c.4500ft, *Bolus* 7674 (holo. BOL).

Polycarena calva (Hiern) Levyns in J. S. Afr. Bot. 5:37 (1939).

***Phyllopodium anomalum* Hilliard, species nova** nulli arcte affinis, racemis foliatis, limbo corollae minimo (1-2mm diam.), staminibus duobus vix exsertis facile recognoscitur.

Type: Cape, Namaqualand, 1500-2000ft, August, *Drège* distributed as *Polycarena plantaginea* Benth. a (holo. E; iso. S, TCD).

Syn.: *Polycarena plantaginea* auct., non *Manulea plantaginis* L.f.: nec *M. plantaginea* Thunb.; Benth. in Hook., Comp. Bot. Mag. 1: 372 (1836) and all subsequent authors.

Ranges from northern Namaqualand to Montagu in the southern Cape.

***Phyllopodium caespitosum* Hilliard, species nova** a *P. micrantho* (Schltr.) Hilliard habitu caespitoso (nec caulibus simplicibus vel parce ramosis), caulium indumento e pilis eglandulosis ad 0.4mm longis pilis glandulosis absentibus (nec e pilis et glandulosis et eglandulosis ad 0.1mm longis), bracteis plerumque latioribus (1.2-2.25mm, nec 0.5-1(-1.5)mm) distinguenda.

Type: Cape, Clanwilliam div., 3219 AD, S. Cedarberg, Wolfberg, 400ft, 3 x 1952, *Esterhuysen* 20574 (holo. BOL; iso. K, PRE).

Ranges from the Cedarberg to the mountains around Ceres and Worcester.

***Phyllopodium collinum* (Hiern) Hilliard, comb. nov.**

Type: Cape, Little Namaqualand, [3017 BD], on hills at Brakdam, 2000ft, *Schlechter* 11156 (holo. BOL; iso. E, K).

Syn.: *Polycarena collina* Hiern in Thiselton-Dyer, Fl. Cap. 4(2):325 (1904).

P. pubescens Benth. in Hook., Comp. Bot. Mag. 1:372 (1836) p.p. quoad *Drège* b, Haazenkraalsrivier, and *Drège* c, Zilverfontein, excluding lectotype.

***Phyllopodium dolomiticum* Hilliard, species nova** nulli arcte affinis sed fortasse prope *P. elegans* (Choisy) Hilliard ponenda, sed statim distinguenda habitu multiramoso (nec virgato), foliis minoribus (infimis c.7-8mm, nec c.18-25mm longis), racemis floribus paucioribus, corollis minoribus tubo 2.5-3mm (nec 3.5-5mm) fauce glabro (nec dense barbato).

Type: Cape, Oudtshoorn div., Rust en Vrede, c.2500ft, 19 v 1959, *Acocks* 20463 (holo. PRE).

Known only from the type collection.

***Phyllopodium elegans* (Choisy) Hilliard, comb. nov.**

Type: Cape, Oudtshoorn div., Cango, *Mund* (holo. B†, iso. K).

Syn.: *Selago elegans* Choisy in DC., Prodr. 12:14 (1848).

Phyllopodium linearifolium H. Bolus in Trans. S. Afr. Phil. Soc. 16:398 (1906). Type: Cape, near Prince Albert, Zwartbergen, 850m, Dec., Bolus 12189 (holo. BOL; iso. BM, K).

Polycarena linearifolia (Bol.) Levyns in J.S. Afr. Bot. 5:37 (1939).

***Phyllopodium lupuliforme* (Thellung) Hilliard, comb. nov.**

Type: Cape, Little Namaqualand [2917 BD], Zabies, 7 viii 1898, Max Schlechter s.n. (holo. Z; iso. BM, BOL, E, K, PRE, S).

Syn.: *Polycarena lupuliformis* Thellung in Vierteljahrss. Nat. Ges. Zürich 61:433 (1916).

***Phyllopodium maxii* (Hiern) Hilliard, comb. nov.**

Type: Cape, Little Bushmanland, Keuzabies, Max Schlechter 102 (holo. K; iso. BOL, E, S).

Syn.: *Polycarena maxii* Hiern in Thiselton-Dyer, Fl. Cap. 4(2):328 (1904).

***Phyllopodium micranthum* (Schltr.) Hilliard, comb. et stat. nov.**

Type: Cape, Clanwilliam div., 3219 AC, Ezelbank, 4500ft, Schlechter 8817 (holo. B[†]; iso. E, K, S).

Syn.: *Polycarena rariflora* var. *micrantha* Schltr. in Bot. Jahrb. 27:181 (1899).

***Phyllopodium mimetes* Hilliard, species nova** *P. capitato* (L.f.) Benth. affinis sed bracteis dorso glabris (nec pilosis) pilis marginalibus ad 0.5–0.75mm longis (nec ad 2mm), calycis lobis minoribus (antico 1–1.5mm longo, nec 1.5–2.75mm), corollae lobis saepe majoribus (lobis posticis 0.75–1.75mm longis, nec 0.4–1mm; lobo antico 1.6–3mm longo, nec 1–2mm), corolla pallide purpurea (nec alba nec cremea), seminibus fere laevibus griseo-purpureis (nec irregulariter colliculatis cremeis) differt. Ab *P. heterophyllo* (L.f.) Benth. bracteis plerumque minoribus (extimis c.2.5–4mm longis, nec 3.5–9mm) pilis marginalibus brevioribus (0.5–0.75mm, nec 1–2mm), calyce minore (lobo antico 1–1.5mm versus 2–3mm), corolla pallide purpurea (nec cremea nec pallide lutea) et seminibus fere laevibus (nec colliculatis) recedit.

Type: Cape, Piquetberg div., 3218 DA, near Het Kruis, 22 ix 1940, Compton 9518 (holo. NBG).

Confined to the SW Cape, from about Het Kruis to Hopefield.

***Phyllopodium namaense* (Thellung) Hilliard, comb. nov.**

Lectotype (chosen here): Namibia, Anibebene, Schenk 285(Z).

Syn.: *Polycarena namaensis* Thellung in Vierteljahrsschr. Nat. Ges. Zürich 60:411 (1915).

***Phyllopodium pubiflorum* Hilliard, species nova** nulli arcte affinis; corollis luteis pubescentibus, floribus in capitula rotundata pedunculos longos nudos vel parce bracteatos terminantia dispositis facile recognoscenda.

Type: Cape, Clanwilliam div., Pakhuis, 29 ix 1940, Esterhuysen 3363 (holo. BOL).

Recorded from Pakhuis Pass and Nieuwoudtville.

Phyllopodium rustii (Rolfe) Hilliard, **comb. nov.**

Type: Cape, Riversdale, *Rust* 100 (holo. B[†], iso. K).

Syn.: *Selago rustii* Rolfe in Thiselton-Dyer, Fl. Cap. 5(1):158 (1901).

Ranges from about Swellendam to the Gamtoos River.

Phyllopodium tweedense Hilliard, **species nova** *P. micrantho* (Schltr.) Hilliard sed pilis internodiorum infimorum 1 vel 2 longiusculis (0.5mm) patentibus glandulosis (nec brevissimis 0.1mm retrorsis eglandulosis), floribus majoribus, calycis tubo 1.3-1.5mm longo (nec 0.75-1.4mm), corollae tubo 2.75-3.5mm longo (nec 1.5-2.5mm) et limbo trans lobos laterales c.5mm metiente (nec 1-2.5mm) distinguitur.

Type: Cape, Laingsburg div., 3320 AB, Tweedside, 27 ix 1951, *Compton* 22850 (holo. NBG).

Recorded only from a small area around Tweedside.

Phyllopodium viscidissimum Hilliard, **species nova** *P. micrantho* (Schltr.) Hilliard sed pilis caulium glandulosis longioribus (0.25mm longis, nec ad 0.1mm) usque as basem caulis (nec internodiis infimis 2-3 pilis eglandulosis c.0.1mm tantum indutis) et bracteis fortasse semper angustioribus (c.0.5mm latis, nec 0.5-1.5mm) glandulose-puberulis (nec eglandulosis) differt.

Type: Cape, Ceres div., 3319 BA, Baviaansberg, 6200ft, 4 xi 1962, *Esterhuysen* 29837 (holo. BOL).

Known only from the type collection.

Polycarena aemulans Hilliard, **species nova** a *P. exiguo* Hilliard corollae tubo plerumque longiore (5.75-16mm, nec 3.5-8mm) pubescente (nec glabro vel pilis parcissimis minutis) purpurascente (nec in sicco luteo), limbo 3-9mm diam. trans lobos laterales (nec 2.5-4mm) distinguenda. A *P. gilioidei* sens. lat. foliis brevioribus et latioribus, superioribus spathulatis 6-15 × 1-3mm (nec linearibus vel interdum anguste oblanceolatis 8-35 × 0.5-1(-2)mm), surculis axillaribus nanis absentibus (in *P. gilioidei* praesentibus), corollae limbo 3-9mm (nec plerumque 7.5-11mm), labio postico barbato vel glabro (nec ore circumcirca barbato), capsulis 3-3.5mm longis (nec 5-6mm) differt.

Type: Cape, Clanwilliam div., 3219 AA, near Pakhuis, 1 ix 1938, *Salter* 7515 (holo. K, iso. BOL).

Ranges from Van Rhy'n's Pass to the Pakhuis mountains and South Cedarberg.

Polycarena batteniana Hilliard, **species nova** *P. capensi* (L.) Benth. affinis sed ramificatione plus minusve divaricata (nec corymbosa), corollae tubo glabro vel subglabro (nec pubescente), limbo albo vel ochroleuco (nec luteo) infra labio postico luteo-notato et glabro vel subglabro (nec circumcirca orem luteo et distincte barbato) differt.

Type: Cape, Niewoudtville, 3119 AC, Neil McGregor's farm, 6 ix 1970, *Batten* 493 (holo. E).

Ranges from about Garies south east to Wupperthal.

Polycarena comptonii Hilliard, *species nova* *P. filiformi* Diels affinis sed foliis basalibus 4 rosulatis (nec rosula absente), foliis glabris (nec glanduloso-pubescentibus), pedicellis plerumque 0.5–1.5mm longis (nec usque ad 0.5mm tantum), bracteis inferioribus saepe calyce distincte longioribus (nec semper brevioribus), calyce pilis minutis in marginibus loborum exceptis glabro (nec calyce glanduloso-pubescente), corollae tubo 1.5–2mm longo (nec 2.6–3.6mm), limbo ad 2.4mm diam. (nec 4–5.5mm), lobis posticis 0.5×0.3 –0.4mm (nec $1-1.75 \times 1-1.5$ mm) in siccitate vivide aurantiacis (nec albis), lobis anticis $1-1.4 \times 0.6$ –0.75mm (nec $1.5-2.25 \times 0.75-1.25$ mm), antheris minutis luteis (nec antheris atris 0.8mm longis). Type: Cape, Laingsburg div., 3320 BA, Whitehill, *Compton* 11230 (holo. NBG).

Known only from Whitehill.

Polycarena exigua Hilliard, *species nova* *P. aemulanti* Hilliard affinis sed corollae tubo plerumque brevior (3.5–8mm nec 5.75–16mm) glabro vel pilis minutis parcissimis (nec pubescente), in sicco luteo in vivo fortasse albo (nec purpurascente), limbo 2.5–4mm diam. (in *P. aemulante* 3–9mm, sed si c.3–4mm staminibus saepe 2 nec 4). Type: Cape, Clanwilliam div., S. Cedarberg, 3219 AD, Wolfberg, 4000ft, 3 x 1952, *Esterhuysen* 20575 (holo. BOL, mixed with a specimen of *P. aemulans*; iso. K, PRE).

Possibly endemic to the Cedarberg.

Polycarena formosa Hilliard, *species nova* *P. aureae* Benth. affinis sed indumento longiore (pilis longissimis 0.6mm, nec 0.4mm), foliis validius dentatis (1–5 paribus dentium acutorum, nec 1–2 paribus dentium obscurorum), bracteis linearibus vel oblongis (nec ellipticis) fere ad apicem calycis adnatis (nec ad dimidium circa) differt. A *P. pubescente* Benth. bracteis linearibus vel oblongis (nec late lanceolatis vel ovatis) fere ad apicem calycis adnatis (nec ad dimidium circa), corollae tubo 5–6mm longo (nec 3.5–5mm), limbo (6–)8–14mm diam. (nec 3–5mm), lobis posticis 2–3mm longis (nec 0.75–1.5mm), anticis 3–5mm longis (nec 1.25–2.5mm) distinguenda.

Type: Cape, Clanwilliam div., 3219 AC, Wupperthal, *Goldblatt* 2531 (holo. NBG, iso.S).

Ranges from Niewoudtville to Wupperthal.

Polycarena gracilis Hilliard, *species nova* a *P. gilioidei* Benth. s.str. corollae tubo glabro 8–25mm longo (nec pubescente 7.5–10mm longo), limbo 7–13.5mm diam. (nec 5–8mm), tubo lobisque albis vel ochroleucis (vel luteis?) nec externe purpureo-suffuso, etiam floribus laxe racemosis (nec in capitula parva sub fructu paulo elongata dispositis). A *P. aemulanti* foliis superioribus linearibus vel anguste oblanceolatis angustioribus ($6-30 \times 0.25-1.5$ –(2)mm, nec $6-15 \times 1-3$ mm spathulatis), calyce 4–6mm longo (nec 2.5–4mm), corollae tubo glabro (nec pubescente), limbo 7–13.5mm diam. (nec 3–9mm), staminibus semper 4 (nec saepe ad 2 vel 3 redactis).

Type: Cape, Clanwilliam div., 3218 BB, Pakhuis Pass, 7 ix 1949, *Steyn* 400 (holo. NBG).

Ranges from about Pakhuis Pass to Piquetberg Mountain.

Polycarena lilacina Hilliard, *species nova* *P. capensi* (L.) Benth. affinis sed characteribus sequentibus differt: indumento (*P. lilacina*: pilis plerumque ad 0.1mm longis, interdum ad 0.2mm, rarissime pilo 0.25mm in caulibus tantum capite glanduloso parvo et inconspicuo; *P. capensis*: pilis 0.25–0.3mm longis capite glanduloso conspicuo); bracteis longioribus (9–17mm nec 5–10(–13)mm); corollae tubo longiore (13.5–16mm nec (7–)9.5–14mm); corollae limbo pallide purpureo (nec luteo nec ochroleuco) basi labii postici tantum luteo-notato et illic dense barbato pilis paucis ad lobos alios dispersis (in *P. capense* corolla circum orem stellatim luteo-aurantiaca et circumcirca barbata sed pilis in labio antico interdum parvis). Type: Cape, Malmesbury div., 3318 CB, Buck Bay near Darling, 16 ix 1980, *Hilliard & Burt* 13016 (holo. E, iso. NU).

Ranges from about Piquetberg and Sauer to Buck Bay and Darling.

Polycarena lilacina var. *difficilis* Hilliard, *var. nov.* a varietate typico indumento longiore (pilis 0.25–0.4mm longis nec 0.1(–0.2)mm) differt. Type: Cape, Van Rhynsdorp div., 3118 CD, farm Kliphoeck, 350ft, 12 ix 1970, *Hall* 3826 (holo. NBG, iso. K).

Ranges from about Doringbaai (3118 CD) south to Darling.

Polycarena nardouwensis Hilliard, *species nova* a *P. batteniana* Hilliard bracteis plerumque longioribus angustioribus (8–18 × 0.5–0.75mm, nec 5–13 × 0.6–1.5mm), corollae tubo longiore glanduloso-pubescente (22–40mm, nec 10–17mm glabro vel pilis paucis minutis obsito), limbo circa orem aurantiaco-suffuso (nec basi labii postici aurantiaco-vel luteo-notato), tubo et lobis externe saepe purpureo-suffusis (in *P. batteniana* haud purpureo-suffusis) differt. A *P. gracili* Hilliard floribus in capitulis sub fructu paulo elongatis (nec distincte racemosis), bracteis longioribus (8–18mm nec 4–7.5mm), calyce plerumque longiore (5.5–9mm, nec 4–6mm), corollae tubo plerumque longiore (22–40mm, nec 8–12(–25)mm) et ore glabro circumcirca aurantiaco-suffuso (nec basi labii postici tantum barbato et aurantiaco-notato) recedit.

Type: Cape, Clanwilliam div., 3118 DC, top of Nardouws Kloof, 13 viii 1976, *Goldblatt* 3861 (holo. E, iso. PRE).

Known only from the Nardouws Kloof area.

Polycarena subtilis Hilliard, *species nova* a *P. capensi* (L.) Benth. ramificatione divaricata (nec corymbosa), bracteis plerumque longioribus et angustioribus (9–18 × 0.4–0.5mm, nec 5–10(–13) × 0.5–1mm), corollae tubo 11.5–26mm longo (nec 7–14mm) glabro vel minute puberulo (nec pubescente); a *P. gracili* Hilliard floribus in capitula parva demum fructifera laxa dispositis, calyce plerumque majore ((5–)6–9mm nec 4–6mm), corollae limbo luteo circum faucem aurantiaco et barbato (in *P. gracili* albo vel ochroleuco infra labio positico tantum aurantiaco et barbato pilis paucis etiam in lobis lateralibus).

Type: Cape, Piquetberg div., 3218 DB, Grey's Pass, 6 ix 1949, *Steyn* 361 (holo. NBG, iso. S).

Known from the valley of the Olifants River south of Clanwilliam to Piquetberg.

***Trieneea* Hilliard, genus novum a *Phyllopodio* Benth.** bractea tantum ad pedicellum vel interdum ad imam basim calycis adnata (nec ad pedicellum et minime ad dimidium calycis tubi adnata), indumento pilis caulinis semper patentibus (in *Phyllopodiis* fere omnibus pilis 1-vel 2-cellularibus curvatis retrorsis) et seminibus (eis *Trieneae* saepe fasciis verticalibus sinuose rugosis, eis *Phyllopodii* aut colliculatis irregulariter rugosis aut laevibus) distinguenda.

Type species: *Trieneea schlechteri* (Hiern) Hilliard.

Derivation of name: The generic name incorporates the initials of Miss Elsie Elizabeth Esterhuysen, without whose collections the genus would be very ill-known.

***Trieneea elsiae* Hilliard, species nova *T. schlechteri* (Hiern) Hilliard affinis** sed racemis statu fructifero iamdiu congestis (nec laxissimis), bracteis inferioribus latioribus subfoliaceis (c. 5–8 × 1.5–3mm, nec 2.5 × 0.3–8mm), calycis lobis plerumque longioribus (lobis anticis 2.5–5mm, nec 1.75–2.5mm), labio corollae postico basi barbato, floribus minimis (autogamis?) exceptis (nec semper glabris) distinguenda.

Type: Cape, Clanwilliam div., S. Cedarbergen, Sandfontein Peak, 5000ft, *Esterhuysen* 13866 (holo. BOL, iso. K).

Known only from the South Cedarberg and Cold Bokkeveld Mountains.

***Trieneea frigida* Hilliard, species nova *T. schlechteri* (Hiern) Hilliard affinis** sed pilis caulis foliorum bractearum multo longioribus (1–2mm nec 0.4–0.5mm), calycis lobis longioribus (lobo antico c. 3.25–4mm, nec 1.75–2.5mm), corollis fortasse majoribus (lobo antico c. 2mm longo, nec 1–1.5mm), staminibus duobus posticis inclusis (nec minime ad orem attingentibus) statim distinguenda. A *T. elsiae* et indumento longiore et staminibus posticis inclusis et insuper corollae lobo postico glabro (nec basi barbato floribus omnibus minimis exceptis) distincta.

Type: Cape, Ceres div., Cold Bokkeveld Mts at Eland's Kloof, 5000ft, *Esterhuysen* 18445 (holo. BOL).

Known only from the type collection.

***Trieneea glutinosa* (Schltr.) Hilliard, comb. nov.**

Type: Cape, Worcester div., on the top of Matroosberg, 6000ft, xii 1892, *Marloth* 2216 (holo. BM).

Syn.: *Phyllopodium glutinosum* Schltr. in J. Bot. 35:220 (1897).

Polycarena glutinosa (Schltr.) Levyns in J. S. Afr. Bot. 5:37 (1939).

***Trieneea lanciloba* Hilliard, species nova et a *T. laxiflora* Hilliard et a *T. lasiocephala* Hilliard** calycis lobis lanceolatis 0.75–1mm latis (nec lineari-lanceolatis 0.4–0.75mm latis) et corollis minoribus (corollae tubo 3.5–5mm

longo, nec 5-7.5mm) distinguenda; etiam a *T. laxiflora* capitulis solitariis compactis (nec laxis et corymboso-paniculatim dispositis), et a *T. lasiocephala* bracteis calyceque fere glabris (nec villosis) recedit.

Type: Cape, Clanwilliam div., Groot Krakadouw, c.1690m, 22 xi 1987, Taylor 11903 (holo. E, iso. STE).

Recorded from Krakadouw Peak and Pakhuis Peak in the northern Cedarberg.

***Trieneea lasiocephala* Hilliard, species nova** *T. laxiflorae* Hilliard affinis sed floribus in capitula solitaria compacta rotundata dispositis (nec in racemosis brevibus laxiusculis corymboso-paniculatis), bracteis et calycis lobis villosis (nec glanduloso-puberulis), corolla alba vel crenea ad basin labii postici glabra (nec pallide purpureo-caerulea basi labii postici vel circumcirca orem barbata) distinguitur.

Type: Cape, Clanwilliam div., Cedarberg, near Crystal Pool hut, 4500ft, Esterhuysen 30016 (holo. BOL, iso. S).

Possibly endemic to the northern Cedarberg.

***Trieneea laxiflora* Hilliard, species nova** *T. lasiocephala* Hilliard affinis sed inflorescentia e racemis laxiusculis corymboso-paniculatim dispositis (nec e capitulis compactis rotundatis solitariis), bracteis calycibusque glanduloso-puberulis (nec villosis) et corolla pallide purpurea limbo barbato (nec corolla alba et glabra) differt.

Type: Cape, Clanwilliam div., N. Cedarbergen, Pakhuis, 2500-3000ft, Esterhuysen 14972 (holo. BOL; iso. K, NBG, PRE, SAM).

Known only from the northern Cedarberg.

***Trieneea longipedicellata* Hilliard, species nova** *T. glutinosae* (Schltr.) Hilliard affinis sed floribus in axillis foliorum superiorum solitariis (nec valde racemosis), pedicellis inferioribus 2.5-6mm longis (nec 1-3mm), corollae tubo 3-4mm longo (nec 4-7.5mm), lobo antico 1.25-2mm (nec 2.5-5mm), labio postico basi glabro (nec pilis clavatis barbato), capsulis minoribus (2.5-3mm longis, nec 4-5mm), seminibus paucioribus (usque ad 8 in quoque loculo, nec multis) differt. A *T. schlechteri* (Hiern) Hilliard bracteis semper \pm linearibus et minus quam 1mm latis (numquam foliaceis) recedit.

Type: Cape, Paarl div., Wemmershoek Peak, 6000ft, 31 xii 1944, Esterhuysen 11236 (holo. BOL; iso. K, PRE).

Apparently confined to the SW Cape, on the mountains stretching from Paarl and Stellenbosch to Genadendal.

***Trieneea schlechteri* (Hiern) Hilliard, comb. nov.**

Type: Cape, Ceres div., rocky places near Sand River in the Cold Bokkeveld, 4500ft, *Schlechter* 10113 (holo. K; iso. BM, BOL).

Syn.: *Phyllopodium schlechteri* Hiern in Thiselton-Dyer, Fl. Cap. 4(2):319 (1904).

Polycarena schlechteri (Hiern) Levyns in J. S. Afr. Bot. 5:37 (1939).

Trieneea taylorii Hilliard, **species nova** *T. schlechteri* (Hiern) Hilliard affinis sed pilis caulis foliorum bractearum calycis longis eglandulosis (nec glandulosis), calyce majore (tubo 0.4–1mm nec 0.25–0.5mm longo, lobo antico 2.4–4mm longo, nec 1.75–2.5mm) et corollis plerumque majoribus (limbo 3.5–5mm trans lobos laterales, nec usque ad 4mm), lobis duobus posticis intense violaceis (nec albis) facile distinguitur.

Type: Cape, Clanwilliam div., N. Cedarberg, Moedersielshoek path up Groot Krakadouw, 1450–1600m, *Taylor* 11894 (holo. E).

Recorded only from the Cedarberg.

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